

NASO-OROPHARYNGEAL RHINOSPORIDIOSIS: ENDOSCOPIC REMOVAL

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ABSTRACT: Rhinosporidiosis is a chronic infestation by the fungus *Rhinosporidium seeberi*, which predominantly affects the mucus membranes of the nose and nasopharynx. We report a case of rhinosporidiosis with presentation as an oropharyngeal mass and a discussion about its endoscopic removal.

Key Words: Endoscopic removal of rhinosporidiosis; nasal/oropharyngeal polypoidal mass; rhinosporidiosis

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Rhinosporidiosis is a chronic fungal like disease process which can cause disease anywhere but mostly affects nasal cavity and nasopharynx. It was previously thought to be a fungus named as *Rhinosporidium seeberi*, but the exact nature of the organism that causes this disease is still uncertain. It usually presents as a polypoidal growth in nasal cavity that involves anterior part of nasal septum and nasal vestibule. The aim of this paper is to report an interesting unusual case of rhinosporidiosis and its endoscopic removal with review of literature.

CASE REPORT

We present a case of a 20-year-old male, native of western India, presented to our outpatient department at Sawai Man Singh Medical College Hospital, Jaipur with a huge mass in throat for 9 months. There was no history of rhinorrhoea, nasal obstruction or epistaxis. The mass was slow in progression and was first noticed by the patient himself. The patient runs a cattleward and was from rural background. On examination, a large round to ovoid, polypoidal, almost smooth surfaced, reddish mass was seen at oropharynx [Figure 1]. It was

nontender, not bleeding on touch, and was movable easily from side to side and in vertical direction. There was no visible mass or pathology on anterior rhinoscopy. Nasal endoscopy showed a large reddish mass with rough granular surface arising from posterior 1/3 of the septum with a broad base in right nasal cavity also involving choana [Figure 2]. It was movable and didn't bleed significantly on touch. The patient was posted for removal of mass under GA. Under endoscopic guidance, bipolar cauterization was done [Figure 3] to separate the broad base of the mass attached at posterior part of septum and it was delivered per orally [Figure 4]. Endoscopic guidance helped in en bloc removal of mass without any significant bleeding. This was about $6'3'3\text{ cm}^3$ and looked more like infected polyp. The nose was packed with merocel, which was removed the next day. The rest of postoperative period was normal with uneventful follow-up. Histopathological examination confirmed it as rhinosporidiosis.

DISCUSSION

Rhinosporidium seeberi is held responsible for this chronic



Figure 1: Showing huge reddish mass at oropharynx

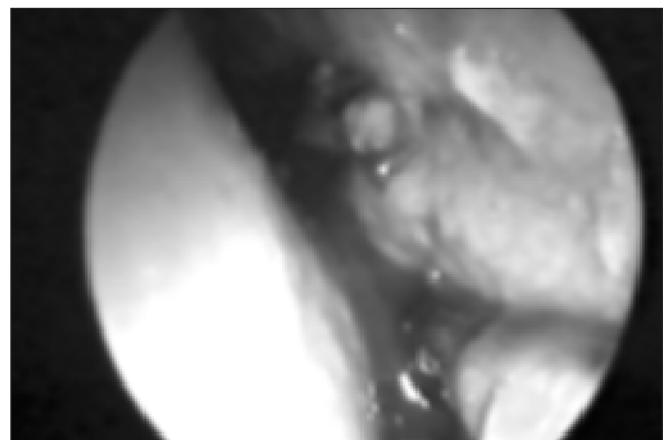


Figure 3: Endoscopy guided cauterization of the base



Figure 2: Endoscopic picture showing mass attached at post 1/3 of septum in right nasal cavity (IT – inferior turbinate, MT – middle turbinate, R – rhinosporidiosis, S – septum)



Figure 4: Per oral removal of the specimen

inflammatory disease in which the principal clinical manifestations are of the nasal cavity. Extranasal infection can also involve conjunctiva, lacrimal sac, oropharynx, nasopharynx, skin and rarely larynx and even bones causing osteolytic lesions in hands and feet.^[1]

The disease is endemic in India and Sri Lanka and usually manifests in young males. It is rarely found in other parts of world, except in individuals who have migrated from endemic areas. The first case was reported by Malbran in 1892 and was published by Seeber in 1900, who thought that they are protozoan spores,^[2] that's why it was named as *R. seeberi*. Ashworth,^[3] in a detailed study described its structure and life cycle and concluded that it was not a protozoan and belonged to a low-order of fungus. This concept was further disputed by Ahluwalia in 1992 who renamed the structures as nodular bodies and discarded of its fungal etiology.^[4] Even the controversies about its etiology were further declared by her in 1997.^[5] She found that a cyanobacterium named *Microcystis aeruginosa* is responsible for rhinosporidiosis and was isolated from excised specimen as well as from pond water. On the other hand al-Serhani in 1998 documented an association between rhinoscleroma and rhinosporidiosis as well.^[6] The mode of infection is probably the dust from cattle dung.

Diagnosis of rhinosporidiosis was usually based on clinical presentation like nasal obstruction, epistaxis, blood tinged watery nasal discharge, friable, granular or sporulated polypoidal mass in nasal cavity or nasopharynx and was used to confirm by histopathology. For a long-period Rhinosporidiosis could not be cultured but in 1999, Ahluwalia, described a simple method for laboratory culture of the organism that causes rhinosporidiosis, in medium BG-11 which is widely used for growing cyanobacteria.^[7]

The most effective treatment is wide excision with a cutting diathermy and cauterization of the base of lesion. Previously antifungal agents were also used but were ineffective. Job

(1999), in one study showed complete remission of infection within 1 year of therapy with Dapsone.^[8]

The principal site of infection is usually the nasal cavity where it manifests by a bleeding polyp, while this case presented to us with a mass in oropharynx with little difficulty in swallowing. Only endoscopic visualization could reveal the attachment of mass at posterior end of the septum with granular appearance. En mass removal could be done only after endoscopic guided cauterization of the base.

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